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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,908	06/21/2001	Yuji Mori	501.40272X00	4769

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EXAMINER
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PHINNEY, JASON R

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/884,908

Applicant(s)

MORI ET AL.

Examiner

Jason Phinney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The Amendment, filed on 4/30/03, has been entered and acknowledged by the Examiner.  
Cancellation of claims 4 and 7 has been entered.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 5,821,692 to Roberts.

Regarding Claim 1, Rogers discloses an organic electroluminescent display comprising a transparent substrate (Figure 1, # 12), an organic light emitting layer (#18) which is formed on a back surface side of the substrate, an electric current supply means which makes an electric current flow through the organic light emitting layer (#'s 16 and 20), a housing (#22) which covers at least the organic light emitting layer and is sealed to the transparent substrate, and a heat radiation material in a liquid form (# 34 and Column 3, Lines 15–25) which is filled in a space formed between the housing and the transparent substrate. Rogers discloses that the heat radiation liquid should be a hydrophobic, fluorinated carbon liquid which serves as an effective barrier to water but Rogers fails to exemplify that the liquid should contain specifically less than 100 ppm water. Rogers, however, teaches that hydrophobic fluorinated carbon liquids should be

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used and that these liquids form an effective barrier to water (Column 3, Lines 26-33). It therefore would have been obvious to one of ordinary skill in the art to minimize the water content in the liquid in order to prevent damage to the organic EL layer.

Regarding Claim 2, Rogers discloses that the housing should be formed of metal (Column 3, Line 9).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make certain that there was as little water as possible in the heat radiation liquid of Rogers in order to prevent damage to the organic EL layer.

4. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 4,734,338 to Eguchi.

Regarding Claim 1, Eguchi also discloses an organic electroluminescent display comprising a transparent substrate (Figure 4, # 41), an organic light emitting layer (#40) which is formed on a back surface side of the substrate, an electric current supply means which makes an electric current flow through the organic light emitting layer (#'s 45 and 44), a housing (#41) which covers at least the organic light emitting layer and is sealed to the transparent substrate, and a heat radiation material in a liquid form (#42) which is filled in a space formed between the housing and the transparent substrate. Eguchi discloses that the heat radiation liquid should be silicone oil, which has been purified, degassed and dried (Column 33, Lines 18-22) but Eguchi fails to exemplify that the liquid should contain specifically less than 100 ppm water. Eguchi, however, teaches that the silicone oil should be purified and dried which indicates that as little water as possible should be in the silicone oil. It therefore would have been obvious to one of

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ordinary skill in the art to minimize the water content in the liquid in order to prevent damage to the organic EL layer.

Regarding Claim 3, Eguchi further discloses that the heat radiation material in a liquid form is silicone oil (Column 33, Lines 18-20).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make certain that there was as little water as possible in the heat radiation liquid of Eguchi in order to prevent damage to the organic EL layer.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,189,405 to Yamashita in view of U.S. Patent No. 5,821,692 to Rogers.

Regarding Claim 5, Yamashita discloses an electroluminescent display comprising a transparent substrate (Figure 3, # 2), first electrodes which are extended in the x direction and are arranged in parallel in the y direction on a display region at a back surface side of the transparent substrate (# 11), a light emitting layer which is formed on the display region such that the light emitting layer also covers the first electrodes (# 13), second electrodes which are extended in the y direction and are arranged in parallel in the x direction on a surface of the organic light emitting layer (#15), a metal housing which covers at least the organic light emitting layer and is sealed to the transparent substrate (# 51), and a non-conducting liquid (#8) which is filled in a space formed between the housing and the transparent substrate. Yamashita fails to exemplify that the electroluminescent layer should be an organic electroluminescent layer. Yamashita also fails to exemplify that the water content of the non-conducting liquid should be limited to 100 ppm or less, however, Yamashita teaches that the water concentration should be kept to a

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minimum within the housing in order to prevent damage to the EL device (see Column 4, Lines 31-41).

Regarding Claim 6 Yamashita fails to exemplify that the first and second electrodes may be formed such that one end thereof are extended and reach the outside of the housing.

Rogers, in an alternate sealed electroluminescent display device, teaches that organic electroluminescent materials may be used instead due to their improved luminance and efficiency (Column 2, Lines 38-39). Rogers also teaches that the first and second electrodes may be formed such that one end thereof are extended and reach the outside of the housing in order to easily make electrical connection with the electrodes (Column 2, Line 65 – Column 3, Line 6).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the display of Yamashita with the organic electroluminescent material and electrodes taught by Rogers in order to improve the luminance and efficiency of the display as well as provide an easier means for electrical connection of the electrodes.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1 and 5 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Phinney whose telephone number is (703) 305-3999. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
JP

June 20, 2003

  
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